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MEMORANDUM FOR : Director, National Reconnaissance Office

SUBJECT : Radiation Belt Monitoring

1. Lt. Col. Lew Allen, Department of Defense Research and Engineering, has suggested the Defense Department establish a capability to assess rapidly the radiation doses encountered in a specific orbit. Presently, we are dependent on informal arrangements with Goddard to obtain dose estimates. This solution will probably not be satisfactory in the long run because:

a. Data inputs to Goddard are relatively slow.

b. Goddard will probably not maintain a continuing, day-by-day, capability.

2. A Department of Defense capability would be very useful in several situations:

a. Rapid estimates could be made of the effects of U.S. or Soviet high altitude nuclear explosions on orbiting or future satellites.

b. Radiation doses encountered in non-nominal orbits could be quickly estimated.

c. Perturbations in the present belt could be quickly assessed. 25X1

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4. It is recommended that the Department of Defense, through National Reconnaissance Office, undertake this project. Such a capability will provide extremely useful data for the CORONA program, particularly in view of our present inability to predict theoretically the magnitude or variations in man-made radiation belts.

Signed Herbert Scoville, Jr.

HERBERT SCOVILLE, JR.
Deputy Director
(Research)

Signature Recommended:

JACK C. LEDFORD
COLONEL, USAF
Assistant Director
(Special Activities)

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